

## **ABSTRACT**

“Analytical study of Astigmatism estimated by Streak Retinoscopy and Automated Refractometer and acceptance of these values on Subjective Correction”

### **BACKGROUND:**

Astigmatism is one of the commonest refractive error that needs to be corrected for giving best glasses to the patients, which can be done by either retinoscopy or Automated Refractometer. Manual refraction is skill based but more accurate as compared to Automated Refractometer which is more costly and less reliable but easy to use.

### **OBJECTIVES OF THE STUDY:**

1. To analyse the accuracy of retinoscopy in acceptance of subjective refraction
2. To analyse accuracy of Autorefraction in acceptance of subjective refraction
3. To compare the accuracy of retinoscopy and autorefraction in acceptance of subjective refraction

## **METHODOLOGY:**

Patients with the age group of 15-35 years presenting to OPD , Department of Ophthalmology, CMCH with refractive errors are taken for this study after obtaining consent. In this study 100 patients were evaluated. Retinoscopy done with the help of Steak Retinoscopy is done in a darkroom, at one arm length distance. Autorefraction is done with the help of Autorefractometer. Three readings will be taken . Subjective refraction test is done following these objective methods. Slit lamp examination, IOP measurement and Fundus examination done to find out any other diseases.

## **RESULTS:**

The results showed that most of the patients in our study were males and majority of patients were in age group of 15-20years. Higher agreement was shown between retinoscopy values and subjective refraction in terms of the cylinder axis. Higher agreement was shown between Autorefractometer values and subjective refraction in terms of the cylinder power. Number of lines improvement in visual acuity is more in case of Streak retinoscopy.

## **CONCLUSIONS:**

According to my study, both Streak retinoscopy and Autorefractometer can be used together, so that they supplement each other. Streak retinoscopy can be used as a reliable tool than Autorefractometer and Automated Refractometer can be used as an effective screening tool for quick assessment.

**Keywords:** Autorefractometer, Streak retinoscopy, Astigmatism, Spherical power, Cylindrical power, Axis, Visual acuity